

Corrections to the Earth's Obliquity Rate and Precession

J G Williams (Jet Propulsion Laboratory, Pasadena, CA 91109;
tel 818-354-6466; e-mail: logos::jgw

The Earth's equator plane precesses due to torques from the Sun, Moon, and planets and the ecliptic plane shifts due to forces from the planets. There are corrections which can be made to the standard theory of precession and obliquity change. Corrections arise from improved knowledge of the ecliptic motion, an ignored lunar effect, planetary torques on the Earth's bulge, and tidal effects. The correction to the obliquity rate is -0.024 "/century as a motion in space or -0.019 "/century as measured against the moving ecliptic. The precession rate must be measured, but there are computed precession accelerations which need correction. The largest uncertainty in the precession acceleration comes from the Earth's changing J_2 .

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- 3a. J. G. Williams
MS 238-332
JPL/Caltech
4800 Oak Grove Drive
Pasadena, CA 91109
- 3b. 818-354-6466 (Office)
- 3c. 818-393-6890 (FAX)
4. G
- 5a. G10 Temporal Variations
- 5b. 1239 Rotational Variations
1299 General or miscellaneous
6. Oral
7. 30% Dull. AAS
8. \$50 check enclosed
9. C
10. None
11. No